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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,137	12/22/2004	Josef Guillaume Christoffel Coenen	TS6347US	7489

7590
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Shell Oil Company
Intellectual Property
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04/05/2007

EXAMINER

FRANK, RODNEY T

ART UNIT	PAPER NUMBER
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2856

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/519,137	Applicant(s) COENEN, JOSEF GUILLAUME CHRISTOFFEL	
	Examiner Rodney T. Frank	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-9 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/28/2007</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 9, 13, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams et al. (U.S. Patent Number 7,100,689, hereinafter referred to as Williams). Williams discloses that the invention relates to a system and method for sensing the characteristics of a fluid in a sub-surface formation. In one embodiment, the invention relates to a sensor apparatus for sensing a chemical in a vapor emitted by a sub-surface fluid sample. In various configurations, the apparatus senses the presence and/or percentage of water, the presence of a gas, an oil/gas ratio, an aliphatic/aromatic hydrocarbon ratio, and/or the presence of corrosive or poisonous chemicals (Please see the abstract).
2. With respect to claim 1, Williams discloses and illustrates in figures 1 and 8, a system for detecting the presence of formation gas in a stream of drilling fluid flowing through a well bore during drilling of the well bore, the system comprising at least one sensor chamber (84) connectable to a drill string for drilling the well bore, each sensor chamber containing a sensor (85) and a volume of a selected gas (supplied by inlet 86) and having a membrane wall which allows passage of formation gas from the stream of drilling fluid into the sensor chamber (82), the sensor being arranged to detect a change

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of a selected characteristic of said volume of gas due to passage of formation gas from the stream of drilling fluid via the membrane wall into the sensor chamber.

With respect to claim 2, Williams discloses the system of claim 1, wherein said membrane wall substantially prevents passage of liquid from the stream of drilling fluid into the sensor chamber, as disclosed in column 9 lines 39 through 49.

With respect to claim 9, Williams discloses the system of claim 1, further comprising a pressure balancing device arranged to maintain the gas pressure in the sensor chamber substantially equal to the fluid pressure in the stream of drilling fluid in column 4 lines 31 through 42.

With respect to claim 13, Williams discloses the system of claims 1, further comprising a gas supply device for supplying the sensor chamber with said selected gas in column 9 lines 55 through 64.

With respect to claim 15, Williams discloses the system of claim 13, wherein the gas supply device is arranged to purge each sensor chamber with the corresponding selected gas in column 9 lines 55 through 64.

With respect to claim 16, a drill string provided with the system of claim 1 is shown in figure 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al.

5. With respect to claims 5, 7, and 8, the reference merely states vapor sensors without giving any specific type of vapor sensor. Therefore, one of ordinary skill in the art would be able to substitute any suitable vapor/gas sensor that is known in the art of down hole type testing, such as a MEMS sensor or a sensor for thermal conductivity, which MEMS are also known to be used to measure.

With respect to claim 6, column 4, lines 31 through 50 disclose the use of heaters in the system to regulate system temperature. While there is not specific mention of temperature sensors and their position relative to the heaters, it would be obvious to one of ordinary skill in the art to use a temperature sensor to determine whether to activate or deactivate the heaters in order to maintain a specific temperature. Further, since the environment of the test gas is the important factor in the operation of the device, it would be obvious to maintain the temperature in the device by measuring through the test gas of interest, and thus having the gas flow through the temperature sensors and the heat source would be obvious.

With respect to claim 14, while the disclosure speaks of the test chambers in a singular configuration, there is no unexpected result obtained by merely multiplying the same system in order to have a multiplicity of the gas test chambers in a system, and thus having multiple chambers would be an obvious variant to one of ordinary skill in the art.

Allowable Subject Matter

6. Claims 3, 4, and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Information Disclosure Statement

7. The information disclosure statement (IDS) submitted on 28 February 2007 was filed after the mailing date of the Notice of Allowance on 08 December 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (571) 272-2193. The examiner can normally be reached on M-F 9-5:30 p.m. EST.

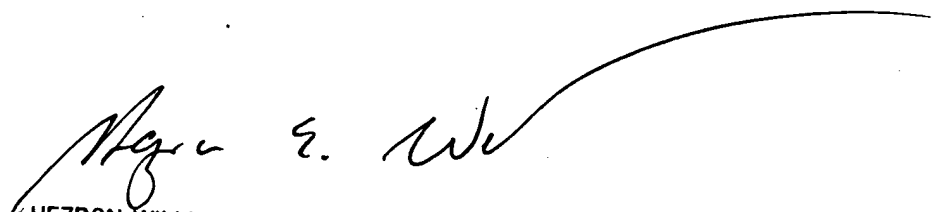
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RTF

April 2, 2007



HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800